

INDIVIDUAL NOISE ASSESSMENT REPORT

Site Name/Facility:	<u>Tijuana River Pilot Channel & Smugglers Gulch Channel</u>
	<u>138a, 138b, 138c (Tijuana River Pilot Channel) and</u>
Master Program Map No.:	<u>138 and 139 (Smuggler's Gulch Channel)</u>
Date:	<u>December 18, 2012</u>
Acoustician Name:	<u>Mark Storm, INCE Bd. Cert.</u>

Instructions: This form must be completed in its entirety for each target facility identified in the Annual Maintenance Needs Assessment report when the potential exists for sensitive wildlife to occur within 750 feet of a proposed maintenance activity. If no sensitive species are expected within 750 feet of maintenance, only the first two rows under the Existing Conditions section must be completed. Attach additional sheets as needed.

EXISTING CONDITIONS

The City of San Diego (City) has developed the Master Storm Water System Maintenance Program (MMP) (City of San Diego 2011a) to govern channel operation and maintenance activities in an efficient, economic, environmentally and aesthetically acceptable manner to provide flood control for the protection of life and property. This document provides a summary of the Individual Noise Assessment (INA) activities conducted within the Tijuana River Pilot (Pilot) Channel and the Smuggler's Gulch (SG) Channel in order to comply with the MMP's Programmatic Environmental Impact Report (PEIR) (City of San Diego 2011b).

Project Description

The channels associated with this assessment report are located in the Tijuana River Valley (Valley), within the jurisdiction of the City of San Diego (City) (Figure 1). The Tijuana River watershed covers an area of approximately 1,725 square miles, of which 73 percent is located in Mexico and 27 percent in the United States. The main Tijuana River flows in a northwesterly direction from the international border into the Valley and City jurisdiction. Approximately 21.9 square miles of the watershed (~1% of the total watershed area) is within City jurisdiction.

The Tijuana River National Estuarine Research Reserve (TRNERR) and a portion of the City of Imperial Beach are generally west of the project area located adjacent to the Tijuana River's discharge to the Pacific Ocean. The Otay-Nestor community and the United States Naval Outlying Landing Field Imperial Beach are located north of the project area; and the community of San Ysidro is located to the east.

The Pilot Channel is included on MMP Maps 138a through 138c and the SG Channel is included on MMP Maps 138 and 139 (City of San Diego 2011a). The Pilot and SG

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Channels are generally located in the Valley roughly bordered by Hollister Street to the east and Monument Road to the south. The Tijuana River low flow channel splits into what are commonly referred to as the Tijuana River's Northern and Southern Channels approximately 800 feet east of Hollister Street. The Pilot Channel follows the Southern Channel.

The Valley, including the project area, is within the Federal Emergency Management Agency's (FEMA) Special Flood Hazard Areas Subject to Inundation by the 1-percent Annual Chance Flood (100-year floodplain). The project areas are zoned OF-1-1 (Open Space-Floodplain) and AR-1-1 (Agricultural/Residential); and are designated for Open Space and Agricultural land uses in the Tijuana River Valley Land Use Plan. In addition, the project area is within the boundaries of the County of San Diego's 2.7 square mile Tijuana River Valley Regional Park (Regional Park). The project area is also within the City's Multiple Species Conservation Program's Multi-Habitat Planning Area (MHPA), which delineates core biological resource areas and corridors targeted for conservation.

The project consists of maintenance and dredging of the Pilot and SG channels to remove anthropogenic-derived sediment and trash that accumulates as a result of development and other practices in the upstream watershed. The removal of sediment and trash is conducted in order to maintain flow conveyance capacities and reduce the risk of flooding to public and private infrastructure in the Valley.

Description of creek/channel geometry(length, width, and depth):

Pilot Channel

The Pilot Channel was originally excavated in 1993 within the Southern Channel. It has been irregularly maintained since that time as an earthen trapezoidal channel that is approximately 5 feet deep, with a 23-foot top width, and a 15-foot streambed width. According to the MMP, the Pilot Channel was constructed to divert wet-weather flows from 2- to 5-year storm events into the Southern Channel (City of San Diego 2011b). The Pilot Channel stretches from 100 feet east to 5,300 feet west of Hollister Street for a total length of 5,400 feet and it flows roughly in an east-west direction.

SG Channel

The SG Channel is an existing historical agricultural channel with manufactured berms. The contributing sub-watershed area is approximately 6.7 square miles, primarily located south of the international border within Canon de los Mataderos. The SG Channel, as originally constructed, is an earthen channel approximately 20 feet wide and 15 feet deep. The SG Channel is tributary to the South Channel and flows in a northerly direction, from the international border past Monument Road until it

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confluences with the Pilot Channel. The portion of the SG Channel maintained by the City extends for a distance of approximately 3,040 feet.

Survey Methods and Date:

Existing typical daytime outdoor ambient sound pressure levels (SPL) were measured at various locations that (to the extent practical) are near or coincident with a periphery approximately 750 feet from the above-referenced maintenance facility alignments. The measurements were limited to daytime periods due to the understanding that proposed facility maintenance activities would not occur during the evening (7 p.m. to 10 p.m.) or nighttime (10 p.m. to 7 a.m.) periods. The 750-foot periphery was selected due to the above-stated instructions for this INA and because a similar distance (at which 60 dBA from maintenance activity in the channel was anticipated) value was presented in the Final Recirculated Master Storm Water System Maintenance Program PEIR (PEIR). This periphery, and the bounded area within, overlaps land owned by the City of San Diego, San Diego County, the State of California, and private owners as shown in Figure 1. The project site is also located within the City's Multiple Species Conservation Program's Multi-Habitat Planning Area (MHPA) and the County of San Diego's Tijuana River Valley Regional Park. According to a City of San Diego Development Services Department official zoning map (City of San Diego, 2007), lands within this bounded area and those adjacent to it are zoned as either open space or agricultural. Observed sample land uses of the latter included agricultural operations and equestrian facilities. There also appear to be occupied residential land uses along Monument Road. The 60 dBA sound level is consistent with part 5 from the City of San Diego California Environmental Quality Act (CEQA) Significance Determination Thresholds (City of San Diego, 2011).

Attended SPL measurements were performed and collected with a Larson Davis Model 820 ANSI Type 1 sound level meter (SLM) (Serial Number 1655) on October 30th, 2012. SLM calibration was field-checked with a Larson Davis Model CAL200 (SN 3704) acoustic calibrator. Measurements were conducted by a member of the URS San Diego acoustics and noise control practice team, as directed by the author of this INA (Mark Storm, an Institute of Noise Control Engineering [INCE] Board Certified Member having 20 years of noise control engineering experience) and in a manner compatible with ISO 1996 guidelines, including wind-screened microphone height at approximately 5-feet above grade.

There were several apparent typical existing noise sources present in proximity to the chosen measurement locations near the Tijuana River Pilot (Pilot) and Smugglers Gulch (SG) Channels contributing to the normal ambient sound levels. These sources include frequent military helicopter flyover (from nearby Navy Outlying Field (NOLF) Imperial Beach) and constant distant ground transportation traffic noise. These two

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sources affect all nine measurement locations to varying degrees. Other observed or audible sound sources include intermittent fixed-wing aircraft flyovers, nearby roadway traffic, horse vocalization, dog barking, and metal clanking from nearby ranches.

Meteorological conditions during the measurement period were typical and appropriate for conducting ambient noise measurements. Air temperatures at the measurement locations varied from 69°F to 79°F, with 48 percent to 57 percent relative humidity (RH). Winds ranged from zero miles-per-hour to nine miles-per-hour from the west. Table 1 below presents a summary of measured data collected at the nine survey locations. A-weighted equivalent sound levels (L_{eq}) represent the energy-average SPL over a ten to fifteen-minute period; and the L_{90} values statistically represent the SPL exceeded ninety percent of the time over these same measurement periods, thus characterizing what might be considered the “background” (e.g., distant highway traffic, other fairly continuous sources of noise, and the amalgam of distant but indiscernible noise) sound exclusive of intermittent dominant sound sources such as the frequent military helicopter sorties.

Table 1 Summary of Existing Outdoor Ambient Sound Levels in Project Vicinity

Survey Location ID	Measured Existing Ambient Outdoor Sound Pressure Level (SPL)	
	L_{eq} (dBA)	L_{90} (dBA)
ST1	56	46
ST2	50	38
ST3	51	37
ST4	53	40
ST5	46	41
ST6	56	46
ST7	45	34
ST8	55	41
ST9	69	51

The large differential (i.e., greater than 10 dBA) between the L_{eq} and L_{90} levels is not unexpected due to the observed helicopter flyover activity. For instance, Figure 4-7 from the 2011 AICUZ Study Update for NAS North Island and Navy Outlying Field (NOLF) Imperial Beach indicates that anticipated aircraft operations noise in the project area west of 15th Avenue may range from 60-65 Community Noise Equivalent Level (CNEL), which translates to approximately 53-58 hourly L_{eq} if operations were constant throughout the day. Measured L_{eq} at ST1, ST6, and ST9 that are nearest to NOLF appear consistent with this expected aircraft operations noise level range.

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Are there sensitive wildlife species within 750 feet of proposed maintenance?				
YES	<input checked="" type="checkbox"/>	NO		
Sensitive Wildlife Observed/Detected: Describe sensitive wildlife anticipated to occur within 750 feet of maintenance that were observed and the closest distance to proposed maintenance.				
<p>As reported in the Individual Biological Assessment (IBA), two adult monarchs (<i>Danaus plexippus</i>), a CNDDDB Rank S3 species, were observed flying over the site (no larval host plants were observed). Yellow-Breasted Chat (<i>Icteria virens</i>) (state Species of Special Concern) was identified by call, but was not visually confirmed. One Coastal California Gnatcatcher (<i>Polioptila californica californica</i>) (federal Threatened, state Species of Special Concern) was seen and heard in the singlewhorl burrobrush shrubs between SG Channel and Staging Area B (Figure 3). Raptors, including a female Northern Harrier (<i>Circus cyaneus</i>) (state Species of Special Concern), Red-Shouldered Hawk (<i>Buteo lineatus</i>) and a Red-Tailed Hawk (<i>Buteo jamaicensis</i>), were seen and heard in and over the maintenance area. The large black willows and occasional eucalyptus (<i>Eucalyptus</i> sp.) trees immediately adjacent to the Pilot Channel could support nests of raptors such as the two detected Buteo hawks (these trees would not be removed by the channel maintenance.)</p> <p>Riparian woodland and adjacent riparian scrub along the northern section of SG Channel and the Pilot Channel, where Southern Riparian Woodland lines the channels, contain suitable habitat for other sensitive species. Least Bell's Vireo (<i>Vireo bellii pusillus</i>) (state and federal Endangered) has been documented in the project area, and part of the Pilot Channel lies within designated critical habitat for this species; Southwestern Willow Flycatcher (<i>Empidonax trailii extimus</i>) (state and federal Endangered) and Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>) (state Endangered, federal candidate for listing) have been documented further east in the same CNDDDB quadrangle, and may use habitat in or near the project area. Yellow-breasted Chat has been documented in the same CNDDDB quadrangle and, according to the San Diego Bird Atlas, has been observed in the Tijuana River, so this species may use suitable habitat in the project vicinity. Coastal California Gnatcatcher has been documented on mesa slopes near the southern end of the site, may use coastal sage scrub upslope of the southern end of SG Channel in Map 139, and may forage in shrubs near the maintenance area. Although the Light-Footed Clapper Rail (<i>Rallus longirostris levipes</i>) (state and federal Endangered) is unlikely to use habitat within the maintenance area, it has been documented nearby in the Tijuana River Valley (Dairy Mart Ponds and the Tijuana River estuary) and implementation of proposed project</p>				

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conservation measures will avoid and minimize potential adverse effects to this listed species, for which no incidental take is anticipated.

MAINTENANCE IMPACTS

List the equipment to be used during maintenance and anticipated noise levels associated with each.

Channel Maintenance Activity

Per the City of San Diego plan drawing notes for the maintenance of Pilot Channel ("Map 137A-C"), the following mechanized equipment is expected for activity resembling the "In-channel Maintenance (Full)" category description on page 4.6-6 of the Final Recirculated Master Storm Water System Maintenance Program PEIR (PEIR). Corresponding estimates of individual equipment reference sound level (dBA, L_{max} at 50 feet) and acoustical usage factor (% of an hour) are from Federal Highway Administration (FHWA) Road Construction Noise Model (RCNM) User's Guide Table 1 (FHWA, 2006).

- "D9 Dozer" (Dozer, 85 dBA, 40%)
- "Cat 345 Excavator" (Excavator, 85 dBA, 40%)
- "Case 821 Front Loader" (Front End Loader, 80 dBA, 40%)
- "Rock Trucks" (Dump Truck, 84 dBA, 40%)
- "Bobcat" (All Other Equipment > 5 HP, 85 dBA, 50%)
- "Mini Excavator" (All Other Equipment > 5 HP, 85 dBA, 50%)
- "Water Truck" (Dump Truck, 84 dBA, 40%)

Stockpile Activity

Per information received via email from the City of San Diego (Jarque, 11/16/12), the following mechanized equipment is expected for stockpile/staging areas "B" and "D". Corresponding estimates of individual equipment reference sound level (dBA, L_{max} at 50 feet) are from FHWA RCNM User's Guide Table 1 (FHWA, 2006), and acoustical usage factors are calculated from estimates of equipment/vehicle usage received from the City of San Diego (Jarque, 11/16/12).

Staging Area "B"

- "Back-hoe" (backhoe, 80 dBA, 100%)
- "Front-end Loader" (Front End Loader, 80 dBA, 100%)
- "Water Truck" (Dump Truck, 84 dBA, 17%)

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<ul style="list-style-type: none"> • “(2) Rock Trucks” (Dump Truck, 84 dBA, 30%) <p><u>Staging Area “D”</u></p> <ul style="list-style-type: none"> • “Back-hoe” (backhoe, 80 dBA, 100%) • “Front-end Loader” (Front End Loader, 80 dBA, 100%) • “Water Truck” (Dump Truck, 84 dBA, 13%) • “(2) Dump Trucks” (Dump Truck, 84 dBA, 10%)
<p><u>Potential Additional Equipment</u></p> <p>If additional equipment or processes were added to these above anticipated rosters, such as de-watering operations involving pumps and other components that may have the potential for operating over portions of the Project duration, the aggregate noise level from maintenance activity would be expected to rise. The magnitude of this rise or additive effect would depend on a number of factors, including as follows:</p> <ul style="list-style-type: none"> • Quantity of operating process and activities, and their individual equipment or components; • Location of the noise emitters, and their distance to noise-sensitive receivers; • Sound power levels of the noise emitters, which are typically related to consumed power levels and/or fluid or mechanical capacities; and, • Duration of the operating processes and their duty cycles (or, frequency of noise emission: continuous, intermittent, or impulsive?). <p>Definition of these factors would depend on Project needs or conditions as they are encountered, such as what may become the need for de-watering pumps—even while such equipment is not currently expected.</p>
<p>Calculate the combined maximum hourly noise level associated with simultaneous operation of equipment during maintenance. Estimate the distance to the 60 dBA Leq including existing ambient noise sources affecting the maintenance area.</p>
<p><u>Channel Maintenance Activity</u></p> <p>This analysis assumes that during a typical hour when maintenance activity occurs, all seven identified equipment may be operating simultaneously from a single point within the channel at the indicated usage factors, resulting in an aggregate reference sound level (i.e., the logarithmic sum of the seven, with each adjusted by its usage factor) of 89 dBA L_{eq} at 50 feet. Using this aggregate reference sound level, and accounting for geometric divergence (6 dBA per doubling of distance), atmospheric acoustical absorption (-1 dBA per 1000 feet), ground acoustical absorption (maximum of -4.8 dBA, per ISO 9613-2, eq. 10), and ignoring any potentially beneficial topographical</p>

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occlusion between source and receiver, a project sound level of 60 dBA hourly L_{eq} may be expected at a distance of approximately 750 feet from a position along the channel centerline.

For purposes of assessing potential noise impacts to nearby residential uses on agriculturally-zoned land near the project area, such as those along Monument Road, the distance at which 75 dBA hourly L_{eq} (either according to the San Diego Noise Ordinance impact threshold per 59.5.0401 or 59.5.0404) is anticipated is approximately 170 feet. The distances at which project noise levels are expected, at 5 dBA decrements and in terms of hourly L_{eq} , are also presented in Table 2 below.

Stockpile Activity

Based on the expected equipment and their usage levels from the preceding paragraphs, this analysis anticipates a reference sound level as high as 86 dBA L_{eq} at 50 feet for Stockpile/Staging Area "B" and 84 dBA L_{eq} at 50 feet for Stockpile/Staging Area "D". After accounting for naturally-occurring sound attenuation in the same fashion as for aggregate noise emission from maintenance activity in the channel, this analysis predicts a project sound level of 60 dBA hourly L_{eq} might also be expected at a distance of approximately 560 feet from Stockpile/Staging Area "B" and approximately 480 feet from Stockpile/Staging Area "D".

Channel + Stockpile "B" Activity

Along an approximately 600-foot segment of the SG Channel alignment that is immediately adjacent to Stockpile/Staging Area "B", it is possible that concurrent activity would take place at both locations and therefore create a condition where noise from the two activities would be greater than either of them separately. The corresponding distances for expected project noise levels from a north-to-south 600-foot long line segment between the channel and Stockpile/Staging Area "B" appear in Table 2.

Access Roads

Along an access road that connects a channel alignment to a stockpile, the source of noise would largely be rock truck movements. Were one to assume five truckloads or pass-bys per hour (as does the analysis in the aforementioned PEIR), and a pass-by duration of about one minute, the resulting estimate for acoustical usage factor would be about 8%, and the expected reference noise level would therefore be 73 dBA. After accounting for naturally-occurring attenuation, a sound level of 60 dBA hourly L_{eq} may be expected at a distance of approximately 155 feet from a position along the access road centerline.

The occurrence of this anticipated 60 dBA hourly L_{eq} project noise level is presented as a single composite contour on Figure 1. Note that this contour represents a

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boundary showing the aggregate extent, over the one-month duration of the project, where this project noise level may attain 60 dBA hourly L_{eq} at a perpendicular distance in feet according to Table 2.

Table 2 Approximated Distances for Predicted Project Noise Levels

Project Activity	Approximate distance (feet) at which predicted project activity noise level (hourly L_{eq}) is expected to occur					
	75 dBA	70 dBA	65 dBA	60 dBA	55 dBA	50 dBA
Channel	170	280	470	750	1275	2065
Stockpile "B"	125	200	335	560	940	1525
Channel + Stockpile "B"	200	325	550	920	1525	2400
Stockpile "D"	110	175	285	480	800	1325
Access Road	45	70	100	155	250	420

Would sensitive wildlife receptors be affected by maintenance noise in excess of 60 dBA L_{eq} ?

YES	<input checked="" type="checkbox"/>	NO	<input type="checkbox"/>	
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Observed sensitive wildlife receptors included those well within a 750-foot buffer distance from the channels under consideration in this study; thus, *when present during their breeding seasons*, they would be exposed to maintenance noise in excess of 60 dBA hourly L_{eq} . Because project noise is not expected to occur during these breeding seasons, no affects are anticipated. Project noise would be expected to be less than 60 dBA hourly L_{eq} beyond this buffer distance, and diminish in magnitude with increasing distance.

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MITIGATION

What mitigation measures would be required to avoid adverse impacts to sensitive wildlife (e.g. barriers or limitations on hours of operation)?

Temporary construction noise from the use of heavy equipment would generate noise in excess of 60 dBA L_{eq} during the maintenance period. Maintenance conducted outside the breeding/nesting season for protected avian species would not result in a significant indirect noise impact and no noise attenuation mitigation is required.

If work is proposed between January 15 (start of the raptor nesting season) and August 15, a pre-maintenance survey for active raptor nests shall be conducted by a qualified biologist in areas supporting suitable habitat, such as within the mature tall black willows and occasional eucalyptus trees along the Pilot Channel. If active raptor nests are found, maintenance shall not occur within 300 feet of a Cooper's Hawk (*Accipiter cooperii*) nest, 900 feet of a Northern Harrier's nest, or 500 feet of any other raptor's nest until any fledglings have left the nest.

In compliance with the USFWS Section 7 BO and Master Program PEIR Mitigation Measure 4.1.2, protocol surveys are required if maintenance is proposed during the vireo breeding season (March 15 - September 15). In compliance with PEIR Mitigation Measure 4.1.2, and 4.1.8, protocol surveys are required if maintenance and noise levels exceeding 60 dBA within the MHPA during the Coastal California Gnatcatcher breeding season (March 1 – August 15). And although work is not proposed after March 15, protocol surveys for the Southwestern Willow Flycatcher are required during the flycatcher breeding season (May 1 to August 30) September 1).

During the period of March 1st to March 14th, were maintenance activity to occur in the SG Channel adjacent to Stockpile/Staging Area "B" during this portion of Coastal California Gnatcatcher breeding season, our predictive noise analysis herein anticipates that noise mitigation measures would be needed due to the proximity of habitat as shown in Figure 1. One option for mitigation would be the installation of temporary noise-reducing barriers, such as an arrangement of two rows of stacked hay bales that sandwich and support a vertical plywood board (e.g., minimum ½" thick), having a height sufficient to provide a visual occlusion between source and receiver (typically 10 to 12 feet high) at the following locations:

Aligned roughly east-to-west, along the south side of Monument Road, extending from the 60 dBA noise buffer line that intercepts Monument Road adjacent to private parcel 6630102900 and the intersection of Monument Road and Hollister Street; and,

Along the western half of the Nevada-shaped site boundary for Stockpile/Staging Area "D".

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If channel maintenance activity were occurring further north during this limited timeframe (March 1st through March 14th), temporary barriers would be recommended at these locations:

Along the west, south and east sides of the Stockpile/Staging Area "B" boundary; and, along the western half of the Nevada-shaped site boundary for Stockpile/Staging Area "D".

Installation of such temporary barriers would be expected to reduce predicted maintenance noise levels in the potentially affected Coastal California Gnatcatcher habitat areas adjacent to the Project and thus decrease the distance at which 60 dBA L_{eq} is anticipated. At receiver distances close to the barrier, barrier noise attenuation is greater; and at distances far from the barrier, barrier noise attenuation is less and may be adversely affected by meteorological conditions. For this reason, and due to the proximity of known habitat and considerable extent of this noise mitigation (over a thousand feet for either case described above), URS strongly recommends that maintenance activity be avoided during this species' breeding season.

The endangered Light-Footed Clapper Rail is considered to have a low potential to occur in or adjacent to the project area and is unlikely to use habitat within the maintenance area. This species has been documented nearby in the Tijuana River Valley (Dairy Mart Ponds and the Tijuana River estuary), and the project's USFWS Section 7 Consultation BO has established conservations measures that will avoid and minimize potential impacts to the clapper rail. These include the requirements that channel maintenance be performed outside of the Light-Footed Clapper Rail breeding season of March 15 through September 15, that a pre-maintenance survey be conducted by a biologist familiar with clapper rail biology and ecology to confirm that clapper rails are not present, and that the clapper rail biologist will oversee compliance with conservation measures for the clapper rail (see IBA).

For reader convenience, applicable noise-related PEIR Mitigation Measures have been included in their entirety as Attachment 1.

ADDITIONAL COMMENTS OR RECOMMENDATIONS

Potential Temporary Noise Impacts to Residential Receptors on Nearest Residentially-zoned Land

While there is a residential community north of Sunset Avenue on residentially-zoned land, with homes apparently nearest to the project at Hollister and Atherton, this location is over 3,000 feet distant from the facilities to be maintained and thus not expected to experience project noise levels that exceed the San Diego Municipal Code daytime noise ordinance (59.5.0401) limit of 50 dBA hourly L_{eq} or the 75 dBA L_{eq}

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limit for daytime-allowed construction noise per 59.5.0404 (if the project maintenance activity were to be classified as construction noise). Thus, no noise impact is expected for this residential community.

Potential Temporary Noise Impacts to Residential Land Uses on Agricultural Land

For apparent occupied homes on privately-owned properties along Monument Road that are zoned as agricultural districts, the San Diego Municipal Code daytime noise ordinance (59.5.0401) limit of 75 dBA hourly L_{eq} or the 75 dBA L_{eq} limit for daytime-allowed construction noise per 59.5.0404 (if the project maintenance activity were to be classified as construction noise) would apply for assessing potential noise impact assessment. As shown in Figure 1, private land parcels 6630101300, 6630102900, 6630103000, and 6630103900 are geographically adjacent to the SG Channel and/or Stockpile/Staging Area "B" and might thus be exposed to project noise levels of 75 dBA L_{eq} per the aforementioned predicted distances shown in Table 2 at which this noise level is expected to occur. These project noise levels, and thus impacts that may be generated as a result, would be temporary in nature—lasting only as long as the expected project duration: one month for the maintenance activity associated with these storm water facilities.

Installation of temporary noise-reducing barriers, such as an arrangement of two rows of stacked hay bales that sandwich and support a vertical plywood board (e.g., ½" thick), and a height sufficient to provide a visual occlusion between source and receiver (typically 10 to 12 feet high) at the following locations would be expected to reduce predicted project noise levels by 3-5 dBA L_{eq} and thus decrease the distances at which 75 dBA L_{eq} is anticipated:

Aligned north-to-south, along the border of private parcel 6630102900 and City of San Diego parcels 6630101100 and 6630103800; and,

Aligned north-to-south, along the border of private parcel 6630101300 and City of San Diego parcel 6630103800.

The barriers, if implemented, would only need to be as long as twice the distance currently indicated in Table 2 for 75 dBA L_{eq} , with the midpoint perpendicular to the geographic center of maintenance activity within SG Channel and/or Stockpile/Staging Area "B". Alternately, to avoid moving the barrier segments as project progress occurs within the channel alignment, the barrier lengths might be assembled to match those of the indicated adjoining parcel boundaries. For a number of reasons, neither of these barrier implementation options is recommended:

Each would likely incur an unreasonable added project cost for mitigating temporary noise emanating from this proposed City of San Diego maintenance activity that would benefit the public interest and likely help prevent what might otherwise be emergency

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work (e.g., channel flooding) that is exempt from noise impact consideration under 59.5.0404(c). Noise levels reduced by the barrier may still exceed 75 dBA Leq, but over regions of the effected private properties where there are no occupied residential structures.

Instead, URS recommends that the City of San Diego applies for a permit, to be reviewed and granted by the Noise Abatement and Control Administrator (NACA), which would allow this temporary construction-type noise to occur without barriers or other typical forms of mitigation. One reason for requesting this kind of permit is that, according to the City of San Diego (Jarque, 11/29/12), maintenance work may need to occur on Sundays and some holidays, which if defined as construction noise is normally prohibited per 59.5.0404(a). In addition, for the bulleted reasons above and because the project noise is only expected to occur during the day (and thus not disrupt quiet nighttime ambient levels that current property owners may enjoy) URS believes the City has reasonable basis to anticipate the granting of such a permit.

Even if such a permit is successfully applied for and granted, URS recommends that motorized maintenance equipment, as well as portable or "hand-held" powered tools involved in any activities, be well-maintained and fitted with original or better than factory-approved noise control features such as sound attenuating air intakes and exhaust mufflers.

Attachment 1: Applicable noise-related PEIR Mitigation Measures